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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/565,101

01/19/2006

Tetsuhiro Ishikawa

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EXAMINER

BARROW, AMANDA J

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

09/27/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/565,101	Applicant(s) ISHIKAWA ET AL.	
	Examiner AMANDA BARROW	Art Unit 1795	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 14 September 2010 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
 b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
 (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
 (b) ☐ They raise the issue of new matter (see NOTE below);
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
 5. ☐ Applicant's reply has overcome the following rejection(s): _____.
 6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
 7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
 The status of the claim(s) is (or will be) as follows:
 Claim(s) allowed: _____.
 Claim(s) objected to: _____.
 Claim(s) rejected: 1-9, 15 and 17.
 Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
 12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____.
 13. ☐ Other: _____.

/Dah-Wei D. Yuan/
 Supervisory Patent Examiner, Art Unit 1795

/AMANDA BARROW/
 Examiner, Art Unit 1795

Continuation of 11. does NOT place the application in condition for allowance because:

The objection to claims 13 and 14 are withdrawn as the Applicant has cancelled these claims.

Applicants submit that claims 1 and 8 are patentable over the cited references at least because it recites, in part, "a threshold value adjusting device for adjusting a reference value according to an output voltage of the fuel cell, such that the reference value decreases as the output voltage of the fuel cell decreases." Applicants submit that the Office Action has used impermissible hindsight bias to reconstruct the claims and failed to show how Sugiura teaches this limitation.

The Examiner respectfully disagrees with these statements. As pointed out in the Office Action, Sugiura teaches that the reference value (V0) (i.e., the "threshold value") may be adjusted by controller 48 ("threshold value adjusting device") (paragraphs 44, 78, and 81) in accordance with a rate of change of an index that is different from the index which is to be compared with the reference value (paragraph 113). For example, the reference voltage may be adjusted based on a rate of change of the output power level of the power supply apparatus according to their preset relationship (paragraph 113), the "preset relationship" of the power supply apparatus being equivalent to dP_{fc}/dt (rate of change of the output power level of the fuel cell) & dP_c/dt (rate of change of the output power level of the capacitor) as the power supply apparatus includes both the fuel cell and the capacitor (paragraphs 37 and 71).

Therefore, as the reference voltage V1 may be adjusted according to a rate of change of the output power level of the power supply apparatus (i.e., the change of the output power level of both the fuel cell and capacitor), and the rate of change of the output power level is directly related to the rate of change of output power voltage [$dP_{fc}/dt = (dV_{fc}/dt) * (dI_{fc}/dt)$], and the rate of change of the output voltage (dV_{fc}/dt) is dependent directly on the actual output voltage of the fuel cell Vfc (dV_{fc}/dt is derived from the tangent line drawn from two points of the graph of voltage versus time), it would have been obvious to a person of ordinary skill in the art to adjust the reference value according to the output voltage of the fuel cell because Sugiura discloses that the reference value may be adjusted in accordance with a rate of change of an index that is different from the index which is to be compared with the reference value and teaches that the reference voltage may be adjusted based on a rate of change of the output power level of the power supply apparatus (i.e., the fuel cell and capacitor), and as documented above, the rate of change of the output power level of the power supply apparatus is directly related to the output voltage of the fuel cell.

The Examiner is not relying upon hindsight to establish that Sugiura teaches that the threshold value adjusting device adjusts a reference value according to an output voltage of the fuel cell because Sugiura teaches that the reference voltage ("threshold voltage") can be adjusted according to rate of change of the output power level of the power supply apparatus (i.e., the fuel cell and capacitor), and it is a well known principle that power and voltage are directly related.

Furthermore, the object of Sugiura's invention is to prevent the reduction of the energy efficiency of the power supply apparatus due to a drop in the energy efficiency of the fuel cell system (paragraph 7). As illustrated in Figures 3, 4A, and 4B, when the output from the fuel cell 60 is small, the energy efficiency of the fuel system 22 as a whole declines, and a drop in energy is prevented by adopting the FC suspend mode in which the operation of the fuel cell 60 is stopped when the load is low, i.e., when the efficiency of the fuel cell system 22 as a whole is poor (paragraphs 56 and 57). As documented in the third embodiment (paragraphs 78-96), the reference voltage V1 becomes larger as the capacitor voltage rate of increase falls, i.e., as the load demand increases and the discharge from the capacitor increases (paragraph 83). Analogously, if the reference value is adjusted according to the rate of change of the output power level of the power supply apparatus (and thus, the output voltage of the fuel cell) as indicated in paragraph 113, it would have been obvious to a person of ordinary skill in the art to adjust the reference value so that it increases as the output voltage of the fuel cell increases or alternatively, decreases as the output voltage of the fuel cell decreases, in order to maximize the energy efficiency of the fuel cell system as taught by Sugiura (paragraphs 7, 83 and 90).